



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,095	02/02/2004	Francois Houde	12214-3US	5766
20988	7590	05/23/2006	EXAMINER	
OGILVY RENAULT LLP 1981 MCGILL COLLEGE AVENUE SUITE 1600 MONTREAL, QC H3A2Y3 CANADA			BANKHEAD, GENE LOUIS	
			ART UNIT	PAPER NUMBER
			3744	
DATE MAILED: 05/23/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/768,095	HOUDE, FRANCOIS	
	Examiner	Art Unit	
	Gene L. Bankhead	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on February 02 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-15 and 18-21 is/are rejected.
- 7) Claim(s) 16 and 17 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 02/02/2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 02/02/2004.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In the instant application the applicant uses the legal phraseology "comprising" and "said" in lines 1-4. Appropriate correction is required.

Suggestion

The room thermostat that includes a circuit board, an electric relay, and insulation material should be mentioned in the abstract to better describe the inventive feature.

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to show reference 28 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with

37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-5,11-14, and19-21 are rejected under 35 U.S.C. 102(a) as being anticipated by Aston (US 3581602). Aston discloses a room thermostat encompassing a circuit board, with at least one electric relay mounted to the board, with a primary casing (the housing of Figure 1 below) that defines a chamber housing for the circuit board, (see Figure 1 and column 1, lines 68-71).

In regard to claim 2, the electric relay includes a switch means (column 1, lines 68-71). Aston further discloses a secondary casing housing the electric relay; the secondary casing being embedded in the insulation material within the primary casing (column 1 lines 52-60).

The chamber of Aston is filled with an insulation material capable of depressing any sound made by the electric relay. See Figure 1.

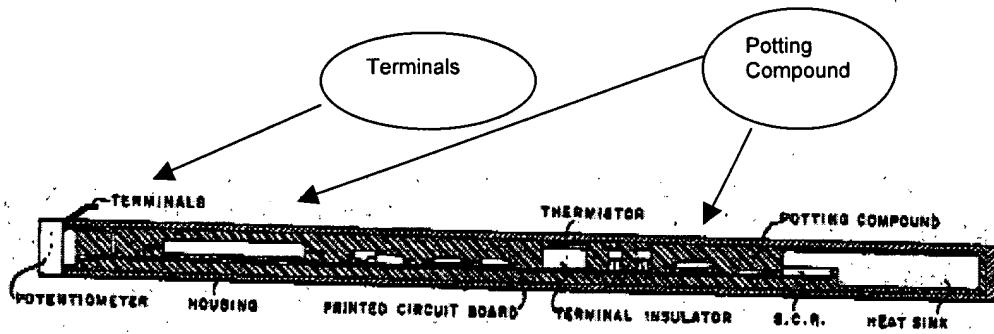


Figure 1 (Aston)

Regarding claims 3 and 4 Aston teaches a potting compound used as the insulation material is a potting compound, Figure 1. Aston discloses that the insulation material encompasses epoxy and urethane compounds, (column 1, lines 60-67).

With regard to claim 5, the potting compound clearly spans the entire surface of the circuit board. The electric relay is substantially surrounded on all sides by the insulation material (see Figure 1).

Regarding claim 11 Aston further teaches an acoustically electric unit with at least one electromechanical switch (column 1, lines 68-71), surrounded by casing, (see Figure 1). Aston further discloses that the electromechanical switch is completely bedded in the insulation material (column 1 lines 30-35).

Regarding claim 12, the electromechanical switch of Aston is housed in a secondary casing within the primary casing, (column 1 lines 52-60 and Figure 1 above). The electromechanical switch encompasses a "gate controlled rectifier device, such as a thyristor or a silicon controlled rectifier", (column 1 lines 70-75). Thus it is inherent that the switch contains an electromagnet and an armature.

In reference to claims 13 and 14, Aston teaches an insulating material that is a potting compound (see Figure 2 below); encompassing epoxy and urethane compounds (column 1 lines 60-67).

Regarding claim 19, Aston discloses an electric unit that is a baseboard relay. Note the electronic circuit is mounted directly on the printed circuit board.

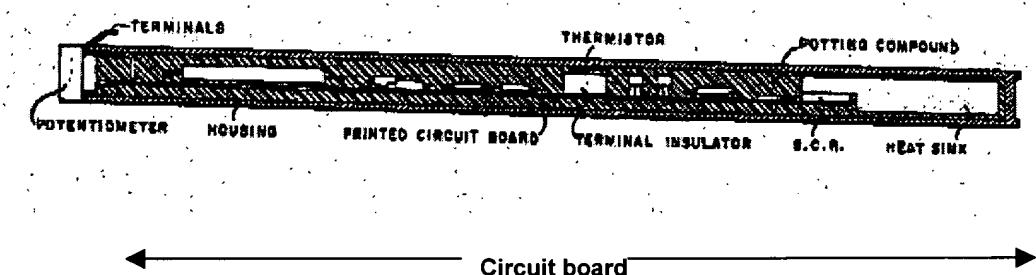


Figure 2 (Aston)

With regard to claims 20 and 21 Aston discloses an electromagnet and armature disposed in a casing (see Figure 2 and column 1 lines 70-75), the casing is filled with potting compound (see Figure 2 above), and the electromechanical switch is enclosed in a secondary switch casing, (column 1 lines 52-60). The switch casing is enclosed in the primary casing, the housing of Figure 2. The thermostat of Aston meets all structural limitations of claims 20

and 21; thus it is inherent that the methods of claims 20 and 21 are capable of being used to dampen the click sound produced by the electromechanical switch.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aston in view of Noba (US 3944774). Claim 6 differs from Aston in calling for a vent in the electric relay capable of venting ionized air. Noba discloses an electric relay with a casing 1, and a vent 12 capable of venting ionized air produced during the relays operation, see Figure 3 below. Noba teaches it is advantageous to be able to conduct air into and from a casing surrounded by insulation. It would have been obvious to one of ordinary skill in the art at the time of the invention provide the thermostat electric relay of Aston with a vent in view of Noba in order to prevent overheating of the relay.

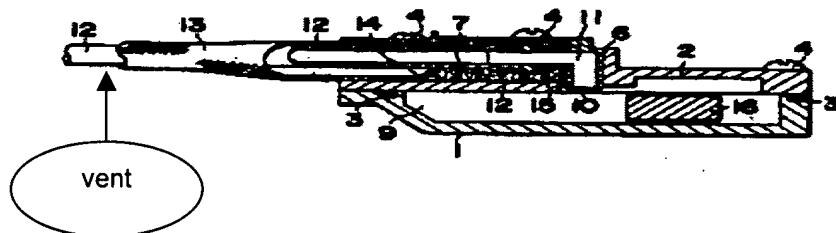


Figure 3 (Noba)

Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aston in view of Nesbitt (US 6347747) in further view of Noba and Moyer et al (US 3421131), as applied to claim 6 above. Claim 7 differs from Aston in calling for a male projection received in a corresponding female part to extend axially through a primary casing with a pathway for air from the electric relay to flow. Moyer discloses a thermostat assembly wherein a male projection 20 is received in a corresponding female part 18, with a gasket about the male projection 26 to tighten the base plate 18 and cover 72, see Figure 5 below.

Claim 10 differs from Aston in calling for a primary casing with at least one opening for pouring insulation material into the chamber of the thermostat. Nesbitt teaches a casing 1, see Figure 4 below, with vents capable of venting ionized air from the electric relay, and for pouring insulation material into the chamber of the thermostat. Nesbitt teaches it is advantageous for air to flow directly across the temperature sensor surface of thermostat. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Aston with Nesbitt, Moyer and Noba in order for the outside ambient air temperature to be detected with greater precision and speed, and to ensure a more rigid connection between the circuit board and base plate, firmly securing the electronic components in the event of mechanical damage to the thermostat.

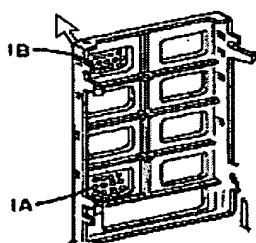


Figure 4 (Nesbitt)

FIG. I

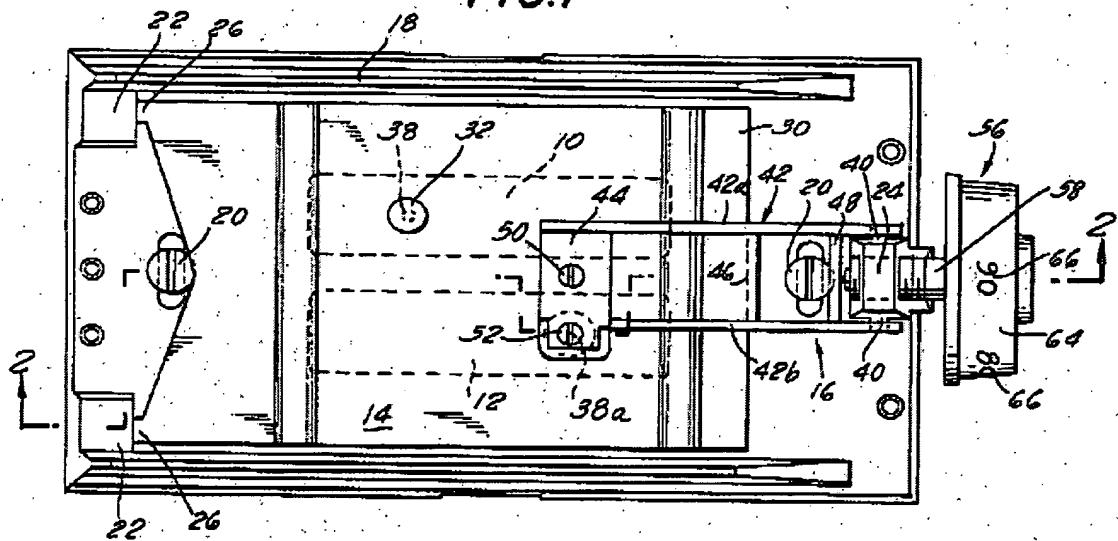


FIG.2

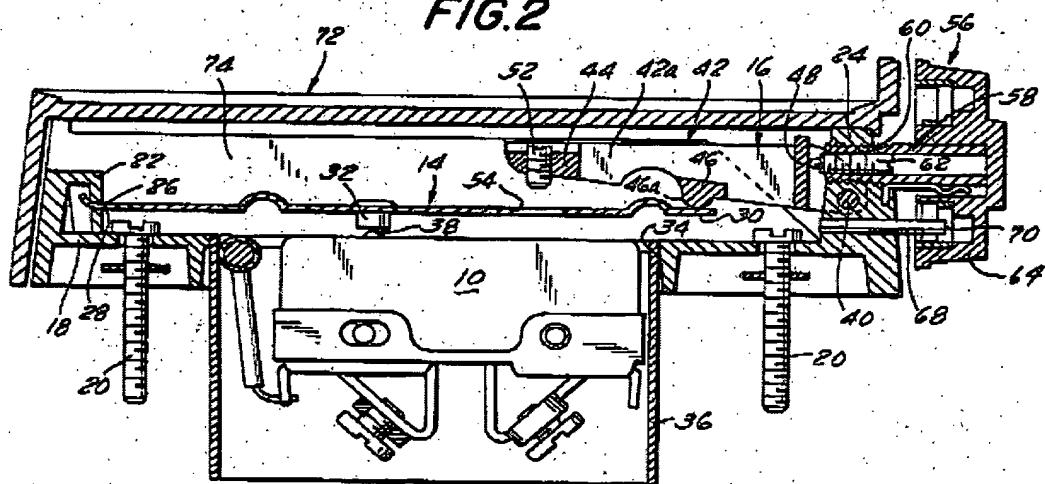


Figure 5 (Moyer)

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aston in view of Noba. Aston discloses all limitations of claim 11, however does not disclose a vent for the second casing housing the electric relay. Noba discloses an electric relay with a casing 1, and a vent 12 capable of venting ionized air produced during the relays operation, see Figure 3 above. Noba teaches it is advantageous to be able to conduct air into and from a casing surrounded by insulation. It would have been obvious to one of ordinary skill in the art at the time of the invention provide the thermostat electric relay of Aston with a vent in view of Noba in order to prevent overheating of the relay.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aston in view of Nesbitt. Aston discloses all limitations of claim 11 however does not disclose an opening in the primary casing for pouring sound insulation material into the chamber of the thermostat. Nesbitt teaches a casing 1, see Figure 4 above, with vents for pouring insulation material into the chamber of the thermostat. Nesbitt teaches it is advantageous for air to flow directly across the temperature sensor surface of thermostat. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the thermostat of Aston with casing of Nesbitt in order for ambient air to directly reach the thermostat temperature sensors more quickly, and thus enable outside ambient air temperature to be detected with greater precision and speed

Allowable Subject Matter

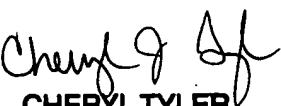
Claims 16, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gene L. Bankhead whose telephone number is (571)-272-8963. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571)-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



CHERYL TYLER
SUPERVISORY PATENT EXAMINER

GB
Examiner
Art Unit 3744